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**From:** Shari Ring [Shari.Ring@cadmusgroup.com]  
**Sent:** 7/14/2020 9:55:16 PM  
**To:** Rao, Kate [Rao.kate@epa.gov]  
**CC:** Ho, Yenhung [Ho.Yenhung@epa.gov]  
**Subject:** Re: [EXT] FW: Contract No. EP-C-15-022, WA No. 4-90; R9 UIC Tech Support -- Clean Energy Systems - Class VI UIC Permit Application # R9UIC-CA6-FY20-1 [Task 1; Subtask 1.2 - Permit Application Analysis]

Hi Kate

We are planning to deliver the geology report at the beginning of next week.

Shari Ring  
The Cadmus Group  
703.247.6159

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**From:** Rao, Kate <Rao.kate@epa.gov>  
**Sent:** Tuesday, July 14, 2020 5:53:56 PM  
**To:** Shari Ring <Shari.Ring@cadmusgroup.com>  
**Cc:** Ho, Yenhung <Ho.Yenhung@epa.gov>  
**Subject:** [EXT] FW: Contract No. EP-C-15-022, WA No. 4-90; R9 UIC Tech Support -- Clean Energy Systems - Class VI UIC Permit Application # R9UIC-CA6-FY20-1 [Task 1; Subtask 1.2 - Permit Application Analysis]

Hi Shari.

Checking in on the deliverable for CES. I have mid July as the due date and just wondering if you have an exact date of when you plan to submit it.

Thanks. Kate

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Kate Rao  
Groundwater Protection Section (WTR 4-2)  
USEPA Region 9  
75 Hawthorne Street, San Francisco, CA 94105  
tel: (415) 972-3533 / fax: (415) 947-3549

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**From:** Rao, Kate  
**Sent:** Tuesday, June 30, 2020 9:00 AM  
**To:** Shari.Ring@cadmusgroup.com  
**Subject:** FW: Contract No. EP-C-15-022, WA No. 4-90; R9 UIC Tech Support -- Clean Energy Systems - Class VI UIC Permit Application # R9UIC-CA6-FY20-1 [Task 1; Subtask 1.2 - Permit Application Analysis]

Hi Shari.

On April 16<sup>th</sup> I sent you the below TDM for tech support under WA 4-90. This email is 're-issuing' the TDM so work on this project can continue in WA 5-90 which starts tomorrow. The deliverable is due mid July and additional support surrounding the tech review may be needed after we received the deliverable.

If you have any questions, please let me know.

Thanks. Kate

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**From:** Rao, Kate  
**Sent:** Thursday, April 16, 2020 11:46 AM  
**To:** [Shari.Ring@cadmusgroup.com](mailto:Shari.Ring@cadmusgroup.com)  
**Cc:** Albright, David <[Albright.David@epa.gov](mailto:Albright.David@epa.gov)>; Ho, Yenhung <[Ho.Yenhung@epa.gov](mailto:Ho.Yenhung@epa.gov)>  
**Subject:** Contract No. EP-C-15-022, WA No. 4-90; R9 UIC Tech Support -- Clean Energy Systems - Class VI UIC Permit Application # R9UIC-CA6-FY20-1 [Task 1; Subtask 1.2 - Permit Application Analysis]

Hi Shari –

Below is a new work initiation request. Calvin is the tech lead and I understand you will be the lead for all Class VI technical reviews. Calvin will schedule a Kick-off call with you and share the OneDrive link. If you have any questions, please let me know.

Thanks. Kate

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**Contract No. EP-C-15-022, Workplan Assignment No. 4-90**  
**R9 Tech Support for Implementation of the UIC Program – Clean Energy Systems - Class VI UIC Permit Application # R9UIC-CA6-FY20-1 [Task 1; Subtask 1.2 - Permit Application Analysis]**

#### **Technical Direction**

**Background:** California Energy Systems (CES) plans to develop a former biomass plant located in Mendota, California into a carbon negative energy (CNE) plant. The Mendota CNE plant uses local agricultural and urban wood wastes as feedstock to produce syngas, which is then separated into H<sub>2</sub> for transportation fuel and H<sub>2</sub>-depleted syngas for electricity generation. CES plans to compress the CO<sub>2</sub> produced during the electricity generation process to a supercritical state and inject it deep into the subsurface for geologic sequestration.

In February 2020, EPA received CES's UIC Class VI Pre-Construction permit application via the Geologic Sequestration Data Tool (GSDT) for a new injection well at the CES Mendota Plant in California. EPA determined that the application contains the information required by the GSDT.

**Action:** Under Task 1, Subtask 1.2 – Technical Review Analysis, review and provide an evaluation of CES's permit application. Note: if it is determined that additional material is needed from the applicant, Cadmus will be requested to perform additional reviews under this TDM until the application is determined to meet all federal UIC technical requirements.

**Deliverable:** Provide a technical analysis report summarizing the results for the technical review of CES's permit application. The report should include an itemized list of additional information necessary to clarify, modify, or supplement the permit application material. Deliverable should be emailed in WORD to Kate Rao and Calvin Ho.

**Estimated LOE:** 180 hours

**Schedule:** Due 8 weeks from the date of the Kick-off Meeting.

**Kick-off Call:** Calvin will schedule a call with the Cadmus tech lead once the material is received to discuss the TDM.

**Material to Review** (available at the shared OneDrive Folder <CES Mendota UIC Permit Application>):

- Section 4 (Reviewing Pre-Construction Information) of the UIC Program Class VI Implementation Manual [see OneDrive Folder]
- Class VI Permit Application Narrative [see subfolder <ProjInfo>]
- Attachment A, Summary of Requirements Class VI Operating and Reporting Conditions [see subfolder <ProjInfo>]
- Attachment B, Area of Review and Corrective Action Plan and all files associated with the attachment [see subfolder <AoRModeling>]
- Attachment C, Testing and Monitoring Plan & Testing and Monitoring Spreadsheet [see subfolder <ProjPlan> & subfolder <PreOpTest>]
- Attachment D, Injection Well Plugging Plan [see subfolder <ProjPlan>]
- Attachment E, Post-Injection Site Care and Site Closure Plan [see subfolder <ProjPlan>]
- Attachment F, Emergency and Remedial Response Plan [see subfolder <ProjPlan>]
- Attachment G, Construction Details [see subfolder <PreOpTest>]
- Quality Assurance and Surveillance Plan [see subfolder <ProjPlan>]

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